



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/021,466	02/10/1998	TERRY LEE OEHRKE	1177	4500

21396 7590 04/08/2002
SPRINT
6391 SPRINT PARKWAY
KSOPHT0101-Z2100
OVERLAND PARK, KS 66251-2100

EXAMINER

KUPSTAS, TOD A

ART UNIT PAPER NUMBER

2153

DATE MAILED: 04/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/021,466

Applicant(s)

OEHRKE ET AL.

Examiner

Tod Kupstas

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 79-115 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 79-115 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2153

DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/15/2002 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 79-80, 82-88, 91-95, 98, 104, 106, 18-114 are rejected under 35 U.S.C. 102(e) as being anticipated by Bolosky et al. (US 5,699,503).

As set forth in claim 79, Bolosky discloses a scalable system for providing network processing and stored data access, the (a) a server (18a, 18b, and 18c) operative to process user requests (b) a switch operatively connected to the server (the system can switch between the

Art Unit: 2153

failed and operative information, this indicates a switch); (c) a data storage device (22A-22C, 24, A-24 C); see col. 8, lines 13-51, operatively connected to the switch; and (d) wherein the server operates independently of the data storage device and is connected to the data storage device via the switch in a manner to permit the inclusion of an additional server to process other user requests without the inclusion of an additional data storage device; (the system is highly configurable and provides for multiple set-ups and provisions for when a storage device may drop off-line, and providing for creating back-up subsystems and controllers); see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 80, Bolosky discloses a system wherein the server operates independently of the data storage device and is connected to the data storage device via the switch in a manner to permit the inclusion of an additional data storage device without the inclusion of an additional server (in no way are servers and storage devices directly connected, if a storage device drops off-line the server does not drop off-line, nor is there any direct correlation between a required number of servers and storage devices, both are configurable based on an end user's desires); see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 82, Bolosky discloses a scalable system for providing network processing and stored data access, the system comprising (a) at least first and second servers (18a-18c) operative to process at least first and second user requests, respectively; (b) a switch operatively connected to each of the servers (switches in the event of a system failure); (c) a

Art Unit: 2153

plurality of data storage devices (22 A-C, 24 A-C) operatively connected to the switch; and (d) wherein the server operates independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional server to process at least an additional user request without the inclusion of an additional data storage device (the system is highly configurable and provides for multiple set-ups and provisions for when a storage device may drop off-line, and providing for creating back-up subsystems and controllers); see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 83, Bolosky discloses a system wherein the servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional data storage device without the inclusion of an additional server; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28..

As set forth in claim 84, Bolosky discloses a system wherein the servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the removal of any one of the plurality of data storage devices without the removal of any of the servers; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 85, Bolosky discloses a system wherein the servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the removal of any one of the servers without the removal of any of

Art Unit: 2153

the data storage devices; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 86, Bolosky discloses a system wherein each of the first and second servers applies an application, the application applied by the first server being substantially the same as the application applied by the second server such that, in the event of a failure of either of the first and second servers, any subsequent user requests will be processed by any other of the servers that are operable; (all elements of the system are mirrorable and configurable, even the controller is suggested to be backed-up; see col. 5, line 61-col. 6, line 24).

As set forth in claim 87, Bolosky discloses a system wherein each of the plurality of data storage devices stores data, the data stored by each of the plurality of data storage devices being substantially the same such that, in the event of a failure of any one of the plurality of data storage devices, the data is accessible from any other of the plurality of data storage devices that are operable; (declustered mirroring; see col. 6, lines 56-65).

As set forth in claim 88, Bolosky discloses a system wherein each of the first and second servers applies an application, the application applied by the first server being substantially the same as the application applied by the second server such that, in the event of a failure of either of the first and second servers, any subsequent user requests will be processed by any other of the servers that are operable, and wherein each of the plurality of data storage devices stores data, the data stored by each of the plurality of data storage devices being substantially the same such that, in the event of a failure of any one of the plurality of data storage devices, the data is accessible

Art Unit: 2153

from any other of the plurality of data storage devices that are operable (the declustered mirroring and the back-up data storage devices); see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 91, Bolosky discloses a scalable system for providing network processing and stored data access, the system comprising: (a) at least first and second sets of servers (more than one 10), each of the sets of servers comprising at least first and second servers (18 a-c) operative to process at least first and second user requests, respectively, and wherein each of the sets of servers applies a separate application (two different video on demand programs); (b) a switch operatively connected to each of the servers within each of the sets of servers (switch implied through the back up process); (c) a plurality of data storage devices (22A-22C, and 24A-24 C) operatively connected to the switch; and (d) wherein the sets of servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional server to any of the sets of servers to process at least an additional user request without the inclusion of an additional storage device see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 92, Bolosky discloses a system wherein the sets of servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional data storage device without the inclusion of an additional server to any of the sets of servers see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

Art Unit: 2153

As set forth in claim 93, Bolosky discloses a system wherein the sets of servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional data storage device without the removal of an additional server to any of the sets of servers see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 94, Bolosky discloses a system wherein the data stored by any one of the plurality of data storage devices is associated with an application applied by any one of the sets of servers (the striped video data).

As set forth in claim 95, Bolosky discloses a system wherein the sets of servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the removal of any one of the servers from any one of the sets of servers without the removal of any of the plurality of data storage devices; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 98, Bolosky discloses a survivable system for providing network processing and stored data access, the system comprising: (a) at least first and second servers (18 a-c) operative to process at least first and second user requests, respectively, (b) a switch operatively connected to each of the servers; (c) a plurality of data storage devices (22 A-C, 24 A-C) operatively connected to the switch (d) wherein each of the first and second servers applies an application, the application applied by the first server being substantially the same as the application applied by the second server (the declustered mirroring) such that, in the event of a

Art Unit: 2153

failure of either of the first and second servers, any subsequent user request will be processed by any other of the servers that are operable; and (e) wherein each of the plurality of data storage devices stores data, the data stored by each of the plurality of data storage devices being substantially the same such that, in the even of a failure of any one of the plurality of data storage devices, the data is accessible form any other of the plurality of data storage devices that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 99, Bolosky discloses a system wherein the data stored by any one of the plurality of data storage devices is associated with an application applied by any one of the first and second servers (the striped video data).

As set forth in claim 103, Bolosky discloses a system wherein each of the first and second servers applies an application, the application applied by the first server being substantially the same as the application applied by the second server such that, in the event of a failure of either of the first and second servers, any subsequent user requests will be processed by any other of the servers that are operable, and wherein each of the plurality of data storage devices stores data, the dat stored by each of the plurality of data storage devices being substantially the same such that, in the even of a failure of any one of the plurality of data storage devices, the data is accessible from any other of the plurality of data storage devices that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 104, Bolosky discloses a method for providing network processing and stored data access, the method comprising the steps of: (a) providing a server operative to

Art Unit: 2153

apply an application; (b) receiving a user request on the server; (c) applying the application to the user request to generate a query; (d) providing a data storage device configured to store data; (e) switching the query to the data storage device; (f) routing requested data from the data storage device to the server in response to the query; and (g) providing an additional server without providing an additional data storage device, or alternatively, providing an additional data storage device without providing an additional server; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 106, Bolosky discloses a method for providing network processing and stored data access, the method comprising the steps of: (a) providing at least first and second servers (18a-18c) operative to apply first and second applications, respectively; (b) receiving first and second user requests on the first and second servers, respectively; (c) applying the first and second applications to the first and second user requests, respectively, to generate first and second queries, respectively; (d) providing at least first and second data storage devices (22 A-C. 24A-24C) configured to store first and second data, respectively; (e) switching the first and second queries to the first and second data storage devices, respectively (f) routing first requested data from the first data storage device to the first server in response to the first query, and routing second requested data from the second data storage device to the second server in response to the second query; and (g) providing an additional server without providing an additional data storage device, or alternatively, providing an additional data storage device without providing an

Art Unit: 2153

additional server; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 108, Bolosky discloses a method wherein the first application is substantially the same as the second application (the video streaming data).

As set forth in claim 109, Bolosky discloses a method further comprising the steps of: (h) in the event of a failure of either of the first and second servers processing any subsequent user requests on any other of the servers that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 110, Bolosky discloses a method wherein the first data is substantially the same as the second data (the video streaming data).

As set forth in claim 111, Bolosky discloses a method further comprising the steps of: (h) in the event of a failure of either of the first and second data storage devices, providing any subsequent requested data from any other of the data storage devices that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 112, Bolosky discloses a method wherein the first application is substantially the same as the second application, and wherein the first data is substantially the same as the second data (the on-demand video data).

As set forth in claim 113, Bolosky discloses a method further comprising the steps of: (h) in the even of a failure of either of the first and second servers, processing subsequent request on any other of the servers that are operable; and) in the event of a failure of either of the first and

Art Unit: 2153

second data storage devices, providing any subsequent requested data from any other of the data storage devices that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

As set forth in claim 114, Bolosky discloses a method for proving network processing and stored data access, the method comprising the steps of: (a) providing at least first and second servers operative to apply first and second applications, respectively, the first application being substantially the same as the second application; (b) receiving first and second user requests on the first and second servers, respectively; (c) applying the first and second applications to the first and second user requests, respectively, to generate first and second queries, respectively; (d) providing at least first and second data storage devices configured to store first and second data, respectively, the first data being substantially the same as the second data; (e) switching the first and second queries to the first and second data storage devices, respectively; (f) routing first requested data from the first data storage device to the first server in response to the first query, and routing second requested data from the second data storage device to the second server in response to the second query; (g) in the event of a failure of either of the first and second server, processing any subsequent requests on any other of the servers that are operable; and (h) in the event of a failure of either of the first and second data storage devices, providing any subsequent requested data from any other of the data storage devices that are operable; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

Art Unit: 2153

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 81, 89, 96, 100, 105, 107, and 115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolosky et al. (US 5,699,503).

Official notice is taken regarding claims 4-9. Utilizing various application processes, such as a mail application, a news application, a directory application, a content application, a groupware application, or an Internet protocol (IP) service are old and notorious in the art. One of ordinary skill in the art would have used any one of these applications in the system as taught by Bolosky. The rationale is as follows: It would have been desirable to have used an application that is used by multiple people. As any of the previously mentioned applications are utilized by many in the field, it would have obvious to one of ordinary skill in the art to have utilized one of these applications in the system as taught by Bolosky, thereby providing an application in the system that is frequently used by end users.

6. Claims 90, 97, 99, and 101-103, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolosky et al. (US 5,699,503), in view of Peacock (US 4,914,570).

Art Unit: 2153

Bolosky does not disclose having a load balancer. Peacock discloses having a load balancer in operation with multiple processors; see col. 12, lines 50-58. It would have been obvious to a person of ordinary skill in the art at the time this invention was made to have provided the system of Bolosky, with a load balancer, as taught by Peacock. The rationale is as follows: It would have been desirable to have been able to efficiently process the information. As Peacock teaches the desirability of using a load balancer, one of ordinary skill would have been motivated by Peacock's teaching to have provided a load balancer to the system of Bolosky, thereby having provided efficient means for processing the information, and preventing the breakdown of the system.

As set forth in claim 102, Bolosky discloses a scalable system for providing network processing and stored data access, the system comprising (a) at least first and second servers (18a-18c) operative to process at least first and second user requests, respectively; (b) a switch operatively connected to each of the servers; (c) a plurality of data storage devices (22A-22-C, 24A-24C) operatively connected to the switch; (e) wherein the servers operate independently of the data storage devices and are connected to the data storage devices via the switch in a manner to permit the inclusion of an additional server to process at least an additional user request without the inclusion of an additional data storage device, to permit the inclusion of an additional data storage device without the inclusion of an additional server, to permit the removal of any one of the servers without the removal of any of the data storage devices, and to permit the removal

Art Unit: 2153

of any one of the data storage devices without the removal of any of the servers; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28.

Response to Arguments

7. Applicant's arguments filed 3/15/2002 have been fully considered but they are not persuasive.

Applicant argues that the instant invention differs from Bolosky by being able to have the storage devices and servers added and removed without adding and removing respective servers or storage devices corresponding to the device removed. The Examiner contends that Bolosky is fully scalable in the sense that the Applicant intends. The system is highly configurable and provides for multiple set-ups and provisions for when a storage device may drop off-line, and providing for creating back-up subsystems and controllers; see col. 8, line 38-col. 9, line 34, col. 5, line 61-col. 6, line 23, and col. 7, lines 4-28. In no way are the servers and storage devices directly connected, if a storage device drops off-line the server does not drop off-line, nor is there any direct correlation between a required number of servers and storage devices, both are configurable based on an end user's desires. Applicant further suggests that Bolosky teaches against full scalability by having a microprocessor associated with a data storage device. The Examiner disagrees noting that some data storage device must be accessed for the server to function, and the degree of association present in Bolosky is no more than that present in the Applicant's instant invention.

Art Unit: 2153

Applicant further argues that in Bolosky “each of the data storage devices do not store substantially the same data in order to ensure survivability of the system. In fact, the “striping” and “declustered mirroring” processes of Bolosky are designed such that each of the data storage devices store a different set of data for survivability purposes.” (Emphasis added by Applicant). The Examiner disagrees noting that declustered mirroring is taking a copy of the data (which is “substantially the same data”) and spreading it across the data storage devices, twice, in the even of a failure. Bolosky clearly meets this limitation.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tod Kupstas whose telephone number is (703) 305-2655.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess, can be reached at (703) 305-4792. The fax phone number for this art unit is (703) 308-6743. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 305-3900.



Dung C. Dinh
Primary Examiner

Tod Kupstas

4/3/2002